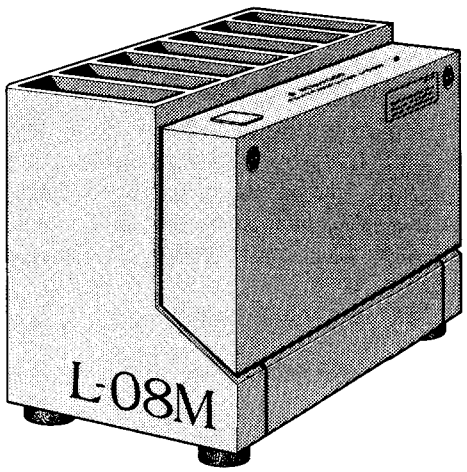
NEW HIGH SPEED POWER AMPLIFIER

L-08M

INSTRUCTION MANUAL



KENWOOD

PRINTED IN JAPAN B50-3293-00 (PM) (T)
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INTRODUCTION

The purpose of this manual is to acquaint you with the operating features of your new amplifier. You will notice that in every detail of planning, engineering, styling, operating convenience, and adaptability, we have sought to anticipate your needs and desires.

We suggest that you read this manual carefully. Knowing how to set up your amplifier to the best advantage will enhance your listening pleasure right from the start. You will also become aware of the ease with which you can adjust your amplifier to meet your special requirements.

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FOR YOUR RECORDS

Record the serial number, found on the bottom of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your Kenwood dealer for information or service on this product.

Model L-08M Serial number_____

AFTER UNPACKING

After unpacking, we recommend that you inspect and examine the unit for any possible shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.

We recommend that you retain the original carton and packing materials to prevent any damage should you transport or ship your unit in the future.

INSTALLATION PRECAUTIONS

a) Avoid locations subject to direct sunlight.
b) Avoid high or low temperature extremes.
c) Keep the unit away from heat radiating sources.
d) Choose a location that is relatively free of vibration or excessive dust.
e) Make sure power is off before making any system connections.
f) Allways place the unit horizontally.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT!

U.S.A. AND CANADA

Units shipped to the U.S.A. and Canada are designed for operation on 120 volts AC only. These units are not equipped with AC Voltage Selector switches and the discussion of such switches that follows should be disregarded.

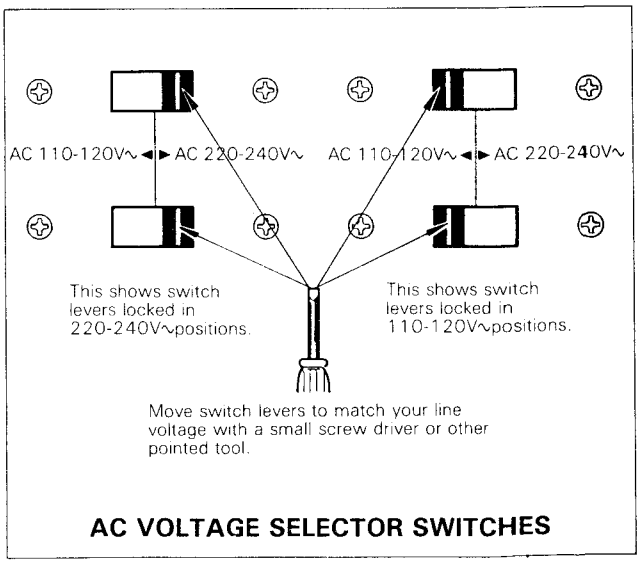
ALL OTHER COUNTRIES

Units shipped to countries other than the U.S.A. and Canada are equipped with AC Voltage Selector switches on the bottom plate.
Refer to the following paragraph for the proper setting of these switches.

AC VOLTAGE SELECTION

This unit operates on 110-120 volts or 220-240 volts AC. The AC Voltage Selector Switches on the bottom plate are set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of these switches match your line voltage. If not, they must be set to your voltage in accordance with the following direction.

Note:
Our warranty does not cover damage caused by excessive line voltage due to improper settings of the AC Voltage Selector Switches.


AC 110-120V~
AC 220-240V~
AC 110-120V~
AC 220-240V~
This shows switch levers locked in 220-240V~positions.
This shows switch levers locked in 110-120V~positions.
Move switch levers to match your line voltage with a small screw driver or other pointed tool.

AC VOLTAGE SELECTOR SWITCHES

SYSTEM PLANNING CONSIDERATIONS

The L-08M is a single channel power amplifier so two units are required for stereophonic operation.

REMOTE POWER SWITCHING

Since they have built-in remote control power switching circuits, they can be turned on or off with the power switch of the L-08C control amplifier. Remote control is also possible with the Kenwood L-07C or L-07C II control amplifiers.

CONNECTION TO THE L-08C CONTROL AMPLIFIER

A 12 meter length Σ audio cable is supplied with the L-08C. Connect it between the OUTPUT 1 connector of the L-08C and the INPUT jack of the L-08M. Always switch power off before making connections.

PLAN SYSTEM CAREFULLY

Plan the layout of your L-08M and L-08C system carefully to avoid direct exposure to speaker sound pressures since vibrations of amplifier components can affect sound quality. Adverse effects may be slight, but they can not be overlooked in such a high quality sound system as this, in which ultimate sound is being sought.

Keep air space open at the bottom of the unit if a cushion is placed beneath the L-08M.

SPEAKER CONNECTING CABLES

Although ordinary speaker cords can be connected to the SPEAKER terminals, the Σ (sigma) drive system will reproduce better sound with the Σ speaker cable (supplied) connected to the SPEAKER terminals.

If the length of the Σ cable is too short for your system, commercially available cables as shown in Fig. 1 can be used.

Pay attention to polarities when using such cables. Keep the cables as short as possible.

For conventional speaker connections, ordinary 2-core cables can be used.

For those connections, however, see page 4 " ❷ SPEAKER terminals" for full details.

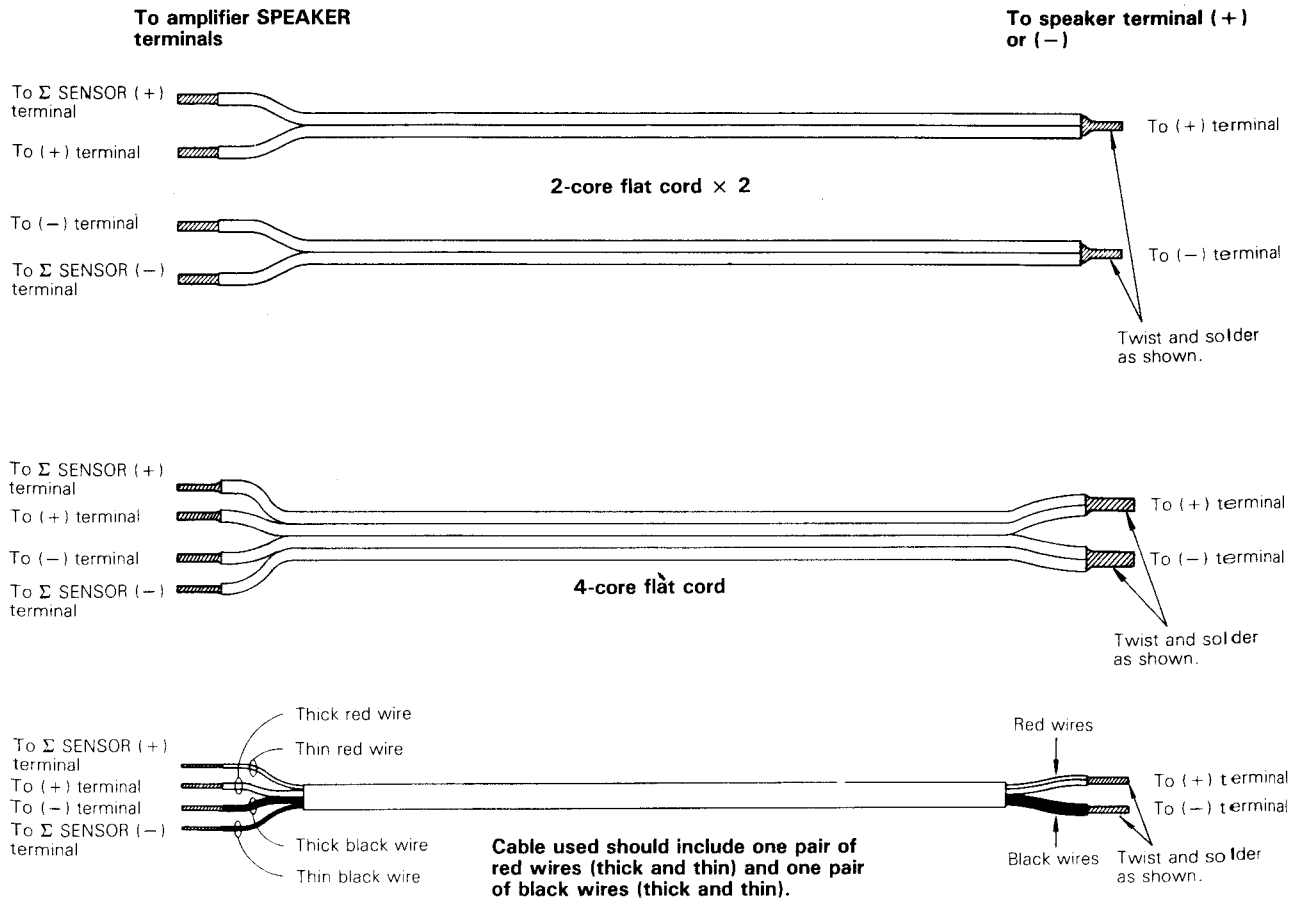
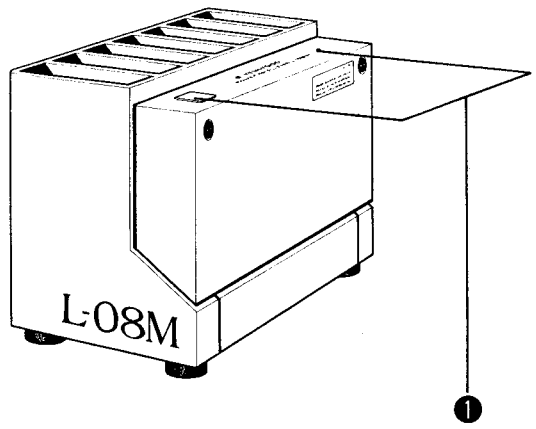
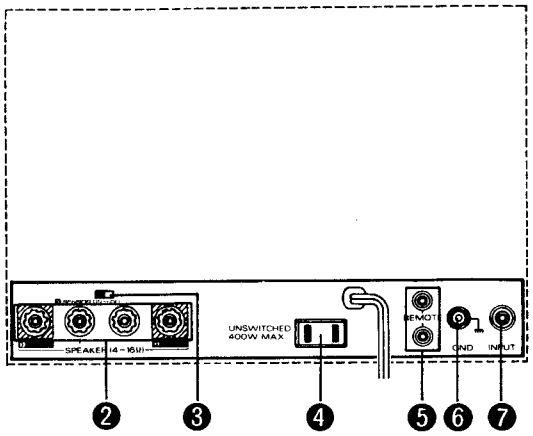

To amplifier SPEAKER terminals
To speaker terminal (+) or (−)
To Σ SENSOR (+) terminal
To (+) terminal
To (+) terminal
2-core flat cord × 2
To (−) terminal
To (−) terminal
To Σ SENSOR (−) terminal
Twist and solder as shown.
To Σ SENSOR (+) terminal
To (+) terminal
To (−) terminal
To Σ SENSOR (−) terminal
4-core flat cord
To (+) terminal
To (−) terminal
Twist and solder as shown.
Thick red wire
Thin red wire
Thick black wire
Thin black wire
Cable used should include one pair of red wires (thick and thin) and one pair of black wires (thick and thin).
Red wires
Black wires
To (+) terminal
To (−) terminal
Twist and solder as shown.

Fig. 1 Substitute Cords for Σ Speaker Cables

CONTROLS AND CONNECTING INSTRUCTIONS





❶ POWER switch and POWER indicator

Press this button to turn power on and light the POWER indicator. Press it again to turn the power off. The POWER indicator should not be lit (POWER switch sould be at off) when this unit is switched by remote control.

❷ SPEAKER terminals

Connection of the Σ speaker cable (supplied) as shown in Fig. 2 to all 4 terminals will enhance listening enjoyment with the improved sound quality of Σ drive. However, 2-core cable connected only to the 2 central terminals (+ and −, no shaded) as shown in Fig. 3 will drive the speaker in conventional manner.
Connect referring to Fig. 2 and 3.

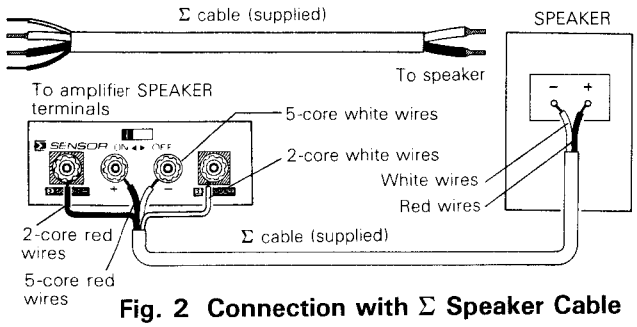


Fig. 2 Connection with Σ Speaker Cable

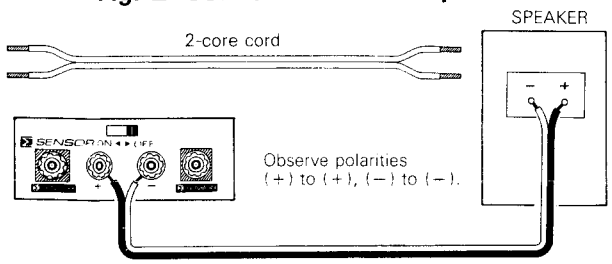


Fig. 3 Connecting Ordinary Speaker Cord

Note:
Connect speakers rated at 4 ~ 16 ohms to the SPEAKER terminals.

❸ Σ SENSOR selector switch

This switch should ordinarily be set at ON and the Σ drive system utilized. We recommend that it be switched OFF for ordinary 2-core speaker connections. It should also be at OFF to prevent hum when using test equipment such as an oscilloscope or power meter.

❹ UNSWITCHED outlet

This AC outlet is convenient for connecting audio equipment that is switched separately from the power amplifier since AC power is available continuously. Any equipment using this power source should not consume more than 400 watts.

❺ REMOTE jacks

Connect the remote cord (supplied) between either of this REMOTE jacks and L-08C's REMOTE jack or the REMOTE jack of L-08M that is used in the opposite channel as shown in the SYSTEM CONNECTION DIAGRAM on page 5. ON/OFF power switching by remote control with the power switch of the L-08C can be obtained.

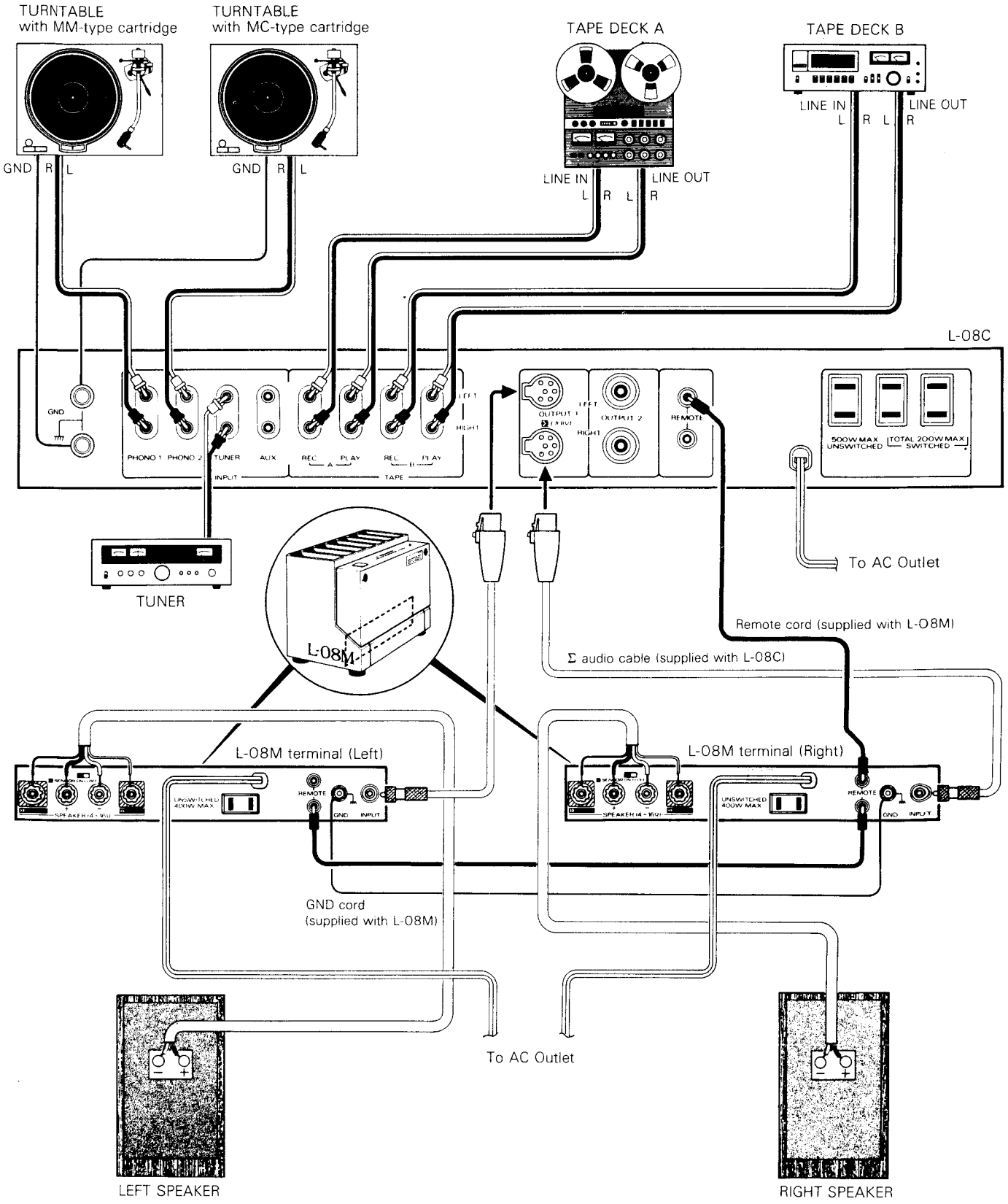
❻ GND terminal

Use the supplied grounding cord for connection here. The other end of the cord should be connected to GND terminal of the L-08M that is used in the opposite channel.

❼ INPUT jack

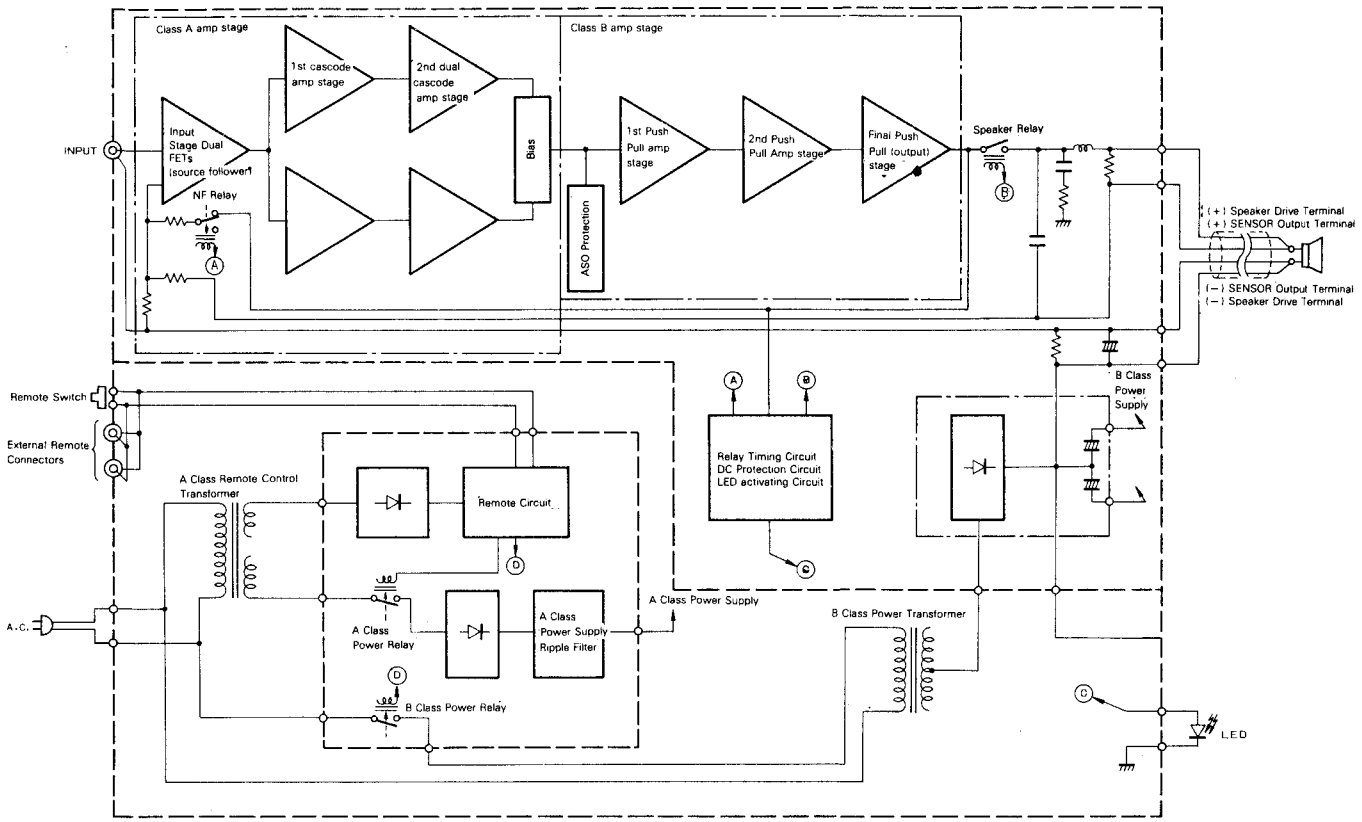
Use the Σ audio cable supplied with the L-08C for connection to this INPUT jack. The other end is connected to the OUTPUT 1 connector of the L-08C. Be sure to insert the pin plug firmly into this jack, and lock the connection by turning the collar.

SYSTEM CONNECTION DIAGRAM



Be sure to disconnect power to the L-08M when connecting or disconnecting the cables.

BLOCK DIAGRAM



THE Σ DRIVE SYSTEM

The speaker cord and output relay are included in the sensor circuit which starts at the speaker enclosure terminals in the Σ drive system as shown in Fig. 4. It is a new approach to control speaker cone vibrations, which it achieves ideally to improve sound quality by preventing distortion.

Performance data obtained through test measurements as shown in Fig. 5 and 6 show improved sound reproduction heretofore unattainable with even the highest quality circuits. Thus, superior sound is assured with Σ drive, and confirmed by these performance data.

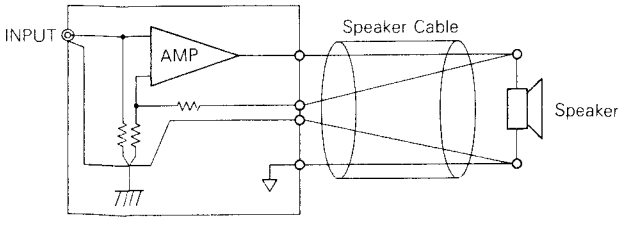


Fig. 4 Principle of Σ Drive

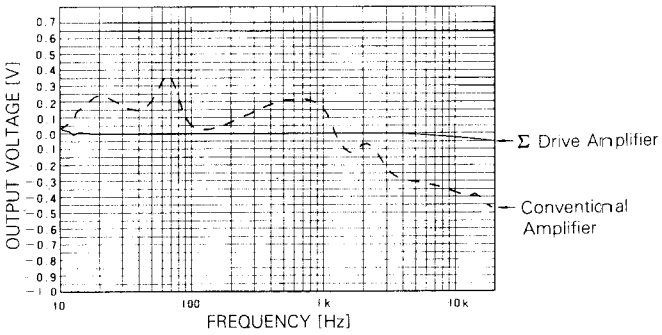
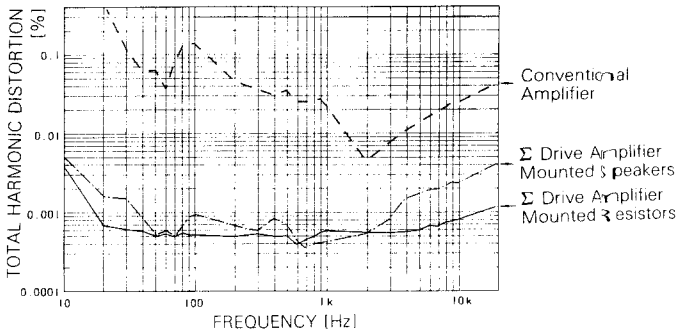


Fig. 5 Comparison of Frequency Response of Mounted Speakers between Σ Drive and Conventional Drive



All measurements were made at the speaker end of 10 m length cables. Distortion is 1/10 to 1/200th for Σ drive as compared to conventional drive throughout the low to high frequency range.

Fig. 6 Comparison of Total Harmonic Distortion of Mounted Speakers

SAFETY PRECAUTIONS

PROTECTION CIRCUIT

Units shipped to countries other than Canada are provided with a protection circuit which cuts off output when the temperature of the body exceeds a certain level.

This protection circuit may operate continuously under high ambient temperatures (e.g., under direct sun light or near a heater) when high power is output. It will recover in 5 to 10 minutes. Operation of this circuit does not indicate that the amplifier is defective.

It is recommended that this amplifier be used in a cool, well-ventilated place.

MODIFICATIONS AND SERVICE

Each unit is shipped after it has been carefully adjusted and tested to provide optimum performance. The unit must not be modified internally. Unauthorized modifications will void the terms of the warranty. High voltages are used in some of the internal circuits. Therefore, do not remove the cabinet or touch internal parts. Refer all service to qualified service personnel.

POWER CORD

Always insert or remove the power plug from the AC outlet by grasping the plug body. Never pull or stretch the cord. Take care that the cord is not subject to traffic or bent sharply around furniture. Keep heavy objects off the cord; never route it under rugs, and avoid the use of extra extension cords. Attention to these precautions will avoid fire or shock hazards.

POWER PLUG

- Switch off the unit and disconnect the power plug from your AC outlet immediately if the abnormality should take place.
- It is desirable to disconnect the power plug from your AC outlet when you leave your house for a long time.

CLEANING

Do not use volatile solvents such as alcohol, paint thinner, gasoline, benzine, etc. to clean the cabinet. Use a silicone cloth or a clean dry cloth.

WARNING

Particular attention must be given to making good electrical contact at the amplifier-output and speaker terminals. Poor or loose connections can cause sparking or burning at the terminals because of the very high power that the amplifier can deliver. Follow these steps carefully.

1. Back the caps of the SPEAKER terminals on the amplifier all the way out by turning them counterclockwise as far as they will go.

2. Insert 5-core red wires into the hole in the + terminal as shown at right.

3. Turn the cap clockwise and tighten securely to ensure a firm contact.

4. Connections at your speakers will vary depending upon the type of terminals used. Check the manufacturer's instructions and make sure that a good, tight, metal-to-metal contact is made.

5. Check all connections. Make sure all are tight, and that there are no loose strands of wire touching the wrong terminals, metal cabinet or trim.

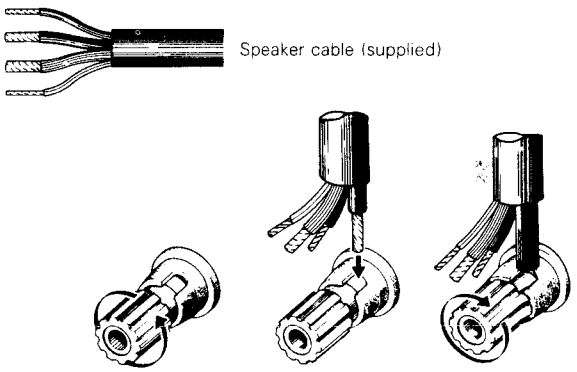


Fig. 7 Speaker Cable Connection

SPECIFICATIONS

POWER AMPLIFIER SECTION

Power Output

170 watts* minimum power, RMS at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.003% total harmonic distortion.

Continuous Power
into 8 ohms at 1,000 Hz ..... 170 W
Dynamic Power Output
into 4 ohms at 1,000 Hz ..... 400 W
Total Harmonic Distortion (20 Hz to 20 kHz)
rated power into 8 ohms 0.003%
rated power into 8 ohms at 1,000 Hz 0.001%
Intermodulation Distortion (60 Hz:7 kHz=4 : 1)
rated power into 8 ohms 0.001%
Transient Response
Rise Time 0.6μs
Slew Rate ..... ± 200 V/μs
Damping Factor ..... 15,000 at 55 Hz
Input Sensitivity/Impedance ..... 1 V/50 kohms
Signal-to-Noise Ratio (IHF-A) ..... 116 dB
Frequency Response ..... DC to 600 kHz +0 dB, −3.0 dB

GENERAL

Power Consumption ..... 4.2 A (UL and CSA)
560 W (IEC)
40 W (No Signal)
AC Outlets ..... Unswitched 1
Dimensions ..... W: 185 mm (7-9/32")
H: 235 mm (9-1/4")
D: 369 mm (14-17/32")
Weight (Net) ..... 12.5 kg (27.5 lb)
(Gross) ..... 14.0 kg (30.8 lb)

* Measured pursuant to Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier in U.S.A.

Note: Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.